AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended)   An apparatus for controlling pulse width modulation (PWM) frequency of a liquid crystal display (LCD), comprising:

control means for changing an LCD frame frequency of the LCD ~~according to~~ based on a system environment, and outputting information based on the changed LCD frame frequency for an LCD inverter, wherein the system environment comprises electronic interference or noise;

PWM converting means for generating a PWM signal ~~of~~ for the LCD inverter based on the information received from the control means; and

driving means for converting an input voltage into a signal having a waveform synchronized to the PWM signal received from the PWM converting means.

2.   (Currently Amended) The apparatus of claim 1, wherein the system environment ~~is~~ comprises detected electronic interference ~~in the system environment~~.

3.   (Original) The apparatus of claim 2, wherein the detected electronic interference results from one of an AC voltage provided to the apparatus or a voltage adaptor coupled to the apparatus.

4.   (Original) The apparatus of claim 3, wherein the detected electronic interference results from a plurality of various signals affecting the LCD frame frequency.

5.   (Currently Amended) The apparatus of claim 2, wherein the apparatus comprises a video controller changes to change a refresh rate to compensate for the detected electronic interference.

6.   (Currently Amended) The apparatus of claim 1, wherein the control means comprises:

refresh rate controlling means for controlling the LCD frame frequency and outputting the controlled frame frequency information along with brightness control information for the an LCD lamp of the LCD; and

brightness controlling means for calculating PWM information based on the controlled frame frequency information received from the refresh rate controlling means, and outputting the calculated PWM information along with the brightness control information received from the refresh rate controller controlling means.

7.   (Original) The apparatus of claim 6, further comprising:

video controlling means for controlling a video signal to be outputted to the LCD based on the frame frequency information received from the refresh rate controlling means.

8.   (Original) The apparatus of claim 6, wherein the refresh rate controlling means varies the frame frequency of the LCD according to the system environment.

9.   (Original) The apparatus of claim 1, wherein the information is a value corresponding to a frequency not interfering with the LCD frame frequency.

10.   (Original) The apparatus of claim 9, wherein the information is a value obtained by calculating PWM information based on the frame frequency, and transforming the calculated PWM information in accordance with a predetermined rate.

11.   (Original) The apparatus of claim 10, wherein the PWM information is outputted in the form of a DC level.

12.   (Currently Amended) The apparatus of claim 9, wherein the information is a value obtained by multiplying the frame frequency by 4.5, and transforming ~~the~~ a resultant value in accordance with a predetermined rate.

13.   (Original) The apparatus of claim 9, wherein the PWM converting means transforms the received information having a value within a predetermined range, in accordance with a predetermined rate so that the PWM signal has a frequency within a predetermined frequency range.

14.   (Original) The apparatus of claim 13, wherein the PWM signal generated by the driving means is based on brightness control information received from the control means, wherein the PWM converting means controls an on-time duty of the PWM signal based on the received brightness control information.

15.   (Original) The apparatus of claim 1, wherein the PWM converting means comprises:

frequency outputting means for outputting a signal having a frequency corresponding to the information received from the control means; and

comparing means for comparing the signal outputted from the frequency outputting means with brightness control information received from the control means to output the PWM signal.

16.   (Currently Amended) The apparatus of claim 15, wherein the PWM converting means comprises level shift means for leveling up the PWM information received from the control means ~~to~~ by a predetermined level.

17.   (Currently Amended) The apparatus of claim 1, <u>further</u> comprising:

the LCD for displaying a video signal in accordance with the frame frequency; and

an LCD lamp for back lighting of the LCD, wherein the driving means ~~is~~ <u>comprises</u> an inverter.

18.   (Original) The apparatus of claim 17, wherein the LCD is used in a portable appliance.

19.   (Currently Amended) A method for controlling an inverter pulse width modulation (PWM) frequency of a liquid crystal display (LCD), comprising:

identifying a frame frequency of the LCD by selecting one of a plurality of frame frequencies based on a system environment, and outputting PWM information based on the identified frame frequency; and

generating a PWM signal, based on the PWM information and brightness control information for an LCD lamp.

20.   (Currently Amended) The method of claim 19, wherein the ~~identifying selects one of a plurality of frame frequencies according to a~~ system environment comprises electronic interference or noise.

21.   (Currently Amended) The method of claim [[20]]19, wherein the system environment ~~is~~ comprises detected electronic interference ~~in the system environment~~, and wherein the detected electronic interference results from one of an AC voltage provided to the system or a voltage adaptor coupled to the system.

22. (Currently Amended) The method of claim 19, <u>further</u> comprising converting an input voltage received from a power source into a signal having a waveform synchronized to the <u>generated</u> PWM signal.

23. (Original) The method of claim 22, wherein the PWM information is a value corresponding to a frequency that does not substantially interfere with the frame frequency, the non-interfering frequency corresponding to a frequency of the PWM signal to which the input voltage is converted.

24. (Original) The method of claim 23, wherein the PWM information is a value obtained by multiplying the frame frequency by 4.5, and transforming the resultant value in accordance with a predetermined rate, and wherein the PWM information is outputted in the form of a DC level.

25. (Original) The method of claim 19, wherein the generating comprises transforming the PWM information having a value within a predetermined range, in accordance with a predetermined rate for generating a PWM signal having a frequency within a predetermined frequency range.

26. (Currently Amended) The method of claim 25, wherein the brightness control information is used to control an on-time duty of the ~~PWM~~ PWM signal.

27.   (Original) The method of claim 19, wherein the generating comprises:

leveling up the PWM information by a predetermined level;

outputting a first signal having a frequency corresponding to the leveled PWM

information; and

comparing the first signal with the brightness control information to output the

PWM signal.

28.   (Currently Amended) The method of claim 19, <u>further</u> comprising varying the

frame frequency of the LCD.

29.   (Currently Amended) The method of claim 28, wherein the frame frequency is

varied under a̶ <u>the</u> system environment in which electric power is supplied only from a battery.

30.   (Currently Amended) An apparatus configured to control an inverter pulse width

modulation (PWM) frequency of a liquid crystal display (LCD), comprising:

a controller configured to select e̶a̶c̶h̶ <u>one</u> of a plurality of different frame

frequencies of the LCD based on a system environment and <u>to</u> output PWM information based

on the selected frame frequency for an LCD lamp; and

a PWM converter configured to generate a PWM signal based on the PWM

information.

31.   (Currently Amended) The apparatus of claim 30, further comprising an inverter configured to convert an input voltage into a signal having a waveform synchronized to the PWM signal received from the PWM converter, wherein the PWM signal is based on brightness control information for the LCD lamp received from the controller.

32.   (New) The apparatus of claim 30, wherein the system environment comprises electrical interference or noise.

33.   (New) A method for controlling an inverter pulse width modulation (PWM) frequency of a liquid crystal display (LCD), comprising:

identifying a frame frequency of the LCD, and outputting PWM information based on the identified frame frequency; and

generating a PWM signal, based on the PWM information and brightness control information for an LCD lamp, wherein generating the PWM signal comprises:

leveling up the PWM information by a predetermined level;

outputting a first signal having a frequency corresponding to the leveled PWM information; and

comparing the first signal with the brightness control information to output the PWM signal.